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## ABSTRACT

Six years of research on issues in assessment and identification of learning disabilities are summarized. The focus of the summary is on referral processes. The first chapter highlights major findings on questions of how many students are referred, student characteristics, reasons for referral, and the nature of the referral process (pre-referral interventions, alternative referral systems). Chapter 2 examines implications for practice, including the need for specified reasons for referral and for training teachers in pre-referral intervention and viewing behavior within its context. Chapter 3 summarizes research on the numbers and types of students referred, and notes that student sex and teachers' tolerance of certain behaviors have impact on referral decisions. Six specific questions are addressed in a chapter on why teachers refer students for psychoeducational evaluation. Questions touch on such issues as institutional constraints and external pressures, characteristics of referring teachers, and changes students must make to remain in the mainstream setting. Research on the referral process itself reviews procedures in existence and notes such alternatives as the use of local norms and of specific interventions within the class before the student is evaluated. A final chapter summarizes the data sources and research procedures used in the studies, including surveys of special education directors, longitudinal studies of decisionmaking, case study investigation, instructional time observations, and comparative studies of referral and pre-referral procedures. (CL)

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 **University of Minnesota**

Research Report No. 141

**REFERRAL RESEARCH: AN INTEGRATIVE SUMMARY OF FINDINGS**

Martha L. Thurlow, Sandra Christenson, and James E. Ysseldyke

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During 1980-1983, Institute research focuses on four major areas:

- Referral
- Identification/Classification
- Intervention Planning and Progress Evaluation
- Outcome Evaluation

Additional information on the Institute's research objectives and activities may be obtained by writing to the Editor at the Institute (see Publications list for address).

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Martha L. Thurlow, Sandra Christenson, and James Ysseldyke

Institute for Research on Learning Disabilities

University of Minnesota

September, 1983

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## Chapter 1

### Overview of IRLD Referral Research

Over a six-year period, the Institute for Research on Learning Disabilities (IRLD) at the University of Minnesota has conducted research on issues in the assessment and identification of learning disabled students. Although initial IRLD studies concentrated on the types of assessment devices being used and the differences between learning disabled students and other students, we consistently were faced with evidence of the importance of the initial decision to refer a student for a psychoeducational evaluation. Our attention turned to the referral process: Who is referred? Why do teachers refer students? What is the nature of the referral process?

This report describes the results of IRLD studies that provide information on the referral process in today's schools. Findings from separate studies have been integrated to address major issues and to produce recommendations for practice that are based on research results. The studies from which the findings and recommendations were derived used a variety of methodologies. Included among these were:

- Surveys and interviews
- Comparative studies
- Longitudinal case studies
- Psychometric assessment of students
- Simulation of decision-making process
- Instructional time observations
- School record reviews

### Highlights of Major Findings

The major questions that we asked and the major findings are presented here in very brief form. Implications of the findings for

practice are discussed in Chapter 2. Details of the evidence that supports the findings are presented in Chapters 3-5. Information on the data sources and specific research procedures are presented in Chapter 6.

• Who Is Referred?

1. How many children are referred?
  - a. Classroom teachers refer, on the average, about three students annually.
  - b. On the average, about 5% of elementary students are referred annually.
  - c. Referral rates vary according to location and referral procedures.
2. What are the characteristics of referred students compared to non-referred students?
  - a. Students referred for psychoeducational evaluation and those labeled as learning disabled are described differently from non-referred or non-labeled peers by both regular and special education teachers.
  - b. Students referred for special education cannot be differentiated from non-referred low achieving students on traditional psychometric measures; however, data reflecting classroom performance (i.e., direct measures) do discriminate the students.
3. Do student characteristics bias decisions made during the referral process?
  - a. Decisions to refer are influenced by the student's sex and whether the student has an older sibling who has exhibited school problems.
  - b. A teacher's tolerance for certain student behaviors influences the teacher's prognoses for student progress; low tolerance for a behavior may increase the likelihood that students exhibiting that behavior will be referred.
  - c. Student problems identified in referral unduly influence educators' placement decisions.

### Why Do Teachers Refer Students?

4. What institutional constraints and external pressures influence teachers' decisions to refer students?
  - a. Institutional constraints limit the number of students referred for psychoeducational evaluation more than external pressures increase the number of students referred.
  - b. School districts' variability in implementing the assessment to placement process influences teachers' decisions to refer.
5. What are the characteristics of referring teachers?
  - a. Teachers report that certain "teacher variables" influence their decisions to refer students for psychoeducational evaluation.
  - b. No consistent relationship exists between several teacher characteristics and teacher referral rates.
6. What are the most common reasons for referral?
  - a. Primary reasons for referrals relate to low academic or behavioral performance in the classroom.
  - b. Poor academic performance does not ensure referral; in some cases, students must demonstrate behavioral difficulties before they are referred for low achievement.
7. To what do teachers attribute referred students' difficulties?
  - a. Students' school difficulties rarely are seen as resulting from an interaction of child characteristics, teacher characteristics, and school characteristics; they are attributed primarily to student or home characteristics.
  - b. Special education teachers are somewhat more likely to identify school factors as the cause of problems than classroom teachers.
  - c. Emphasis on the competence of a student may alter teachers' attributions for a student's problems.
8. What do teachers desire as an outcome from referral and assessment procedures?
  - a. When teachers refer students, they generally want



assistance from special education support staff.

- b. Teachers seem to have much less desire for educational suggestions than they do for student placement, but this may be a result of their previous experiences with the referral system.
9. What changes must referred students make to remain in the mainstream classroom structure?
- Teachers most often indicated that referred students need to make task readiness changes involving student preparation and receptivity to learning to fit within their classrooms.

What is the Nature of the Referral Process?

10. What pre-referral interventions do teachers use?
- a. Use of pre-referral interventions is variable; it rarely occurs as part of a formal referral process.
  - b. Teachers report attempting several pre-referral interventions; however, the interventions appear to lack systematic implementation.
11. Who typically makes a referral?
- a. Classroom teachers most often initiate the referral for special education consideration.
  - b. Typically, a specific form is completed by the referring teacher to initiate the official decision-making process.
12. Who typically receives referrals?
- a. The individual responsible for accepting referrals varies among school districts.
  - b. The competence of the individual accepting the referral is a critical factor in whether teachers decide to refer a student.
13. What happens when a referral is made?
- a. Although variability across school districts is great, in general there is a high probability that once a referral is made the student will be evaluated and served in special education.
  - b. The referral-to-placement process is lengthy.

- c. Student information on referral forms affects assessment devices selected, determination of the student's placement category, and teacher expectations for the student.
  - d. School criteria for eligibility influence eligibility decisions; different students are identified as eligible for services when different criteria are applied.
14. What are the effects of using an alternative system of referral?
- a. The use of data-based procedures, employing local norms with a 2-3 times peer discrepancy criterion, is a viable alternative to traditional teacher-initiated referral procedures.
  - b. The use of a pre-referral intervention system, wherein regular classroom teachers are assisted in finding ways to help problem students in their classrooms, is a viable alternative to traditional referral procedures.

## Chapter 2

### Implications for Practice

Several specific implications for educators can be derived from the IRLD research findings summarized in this report. First, reasons for referral must be delineated and specified. General and subjective reasons (e.g., "poor attitude") must not be accepted as indicative of the need for a student to be given a psychoeducational evaluation. Specific referral reasons are essential for planning appropriate assessment and intervention strategies. Important information can be obtained by describing both (a) student behavior, and (b) teachers' knowledge about, attitudes toward, and tolerance for the characteristics and behaviors represented in the referral reasons.

Second, preservice and inservice training must emphasize more than characteristics of specific "kinds" of students. In fact, this emphasis in isolation may be perpetuating the view that something is wrong with the child. The interaction between the student and educational setting must be characterized. Therefore, training must be provided in assessing and documenting classroom ecology variables that influence both student and teacher behavior.

Third, identifying single causes for a student's difficulties may be very inaccurate and/or incomplete. Linear thinking (e.g., there is a cause and a solution) appears to be common. Teachers must be trained to adopt a systems approach in which behavior is viewed within the context in which it occurs. Without an ecological perspective, teachers may continue to suffer from "teaching helplessness"; that is, their efforts may seem unimportant because they cannot influence a

student whose difficulties are attributed to a single, stable, internal cause (e.g., student's ability).

Fourth, although teachers deserve credit for attempting interventions prior to seeking additional services for students, their pre-referral interventions too often are unsystematic and lacking in accountability. Regular educators deserve training and consultation to help them plan pre-referral interventions that utilize systematic principles of learning (e.g., practice, appropriate level of material) and that meet accountability standards. Such procedures would provide a data base for future assessment decisions while concurrently assisting the classroom teacher.

Fifth, an attitude change regarding referral outcomes is needed. There appear to be "blurred boundaries" between referral and assessment. It seems that educators comply with PL 94-142 by looking for specific student characteristics to justify referrals, and that referral means automatic assessment of the student. Educators seem to believe that the only suitable intervention is special education placement. However, mainstreaming is a reality for handicapped children. In fact, mildly handicapped students spend a higher proportion of their school day in mainstream classrooms than in resource rooms. Referral does not automatically alleviate the regular classroom teachers' problems. Child study teams must provide accountable instructional strategies for any teacher referral; many of these referrals could be handled without formal diagnostic testing.

Sixth, teacher expectations for the student role in the learning process (motivation, willingness to try) should be explained to

students and parents. Further, preservice and inservice training for teachers on how to change student behavior should occur. Too often change in behavior is demanded and expected immediately (an event); in reality, change in students is a process. Teachers should be provided with help in achieving progress in this process.

We, as educators, may have lost sight of the real reason for referral, that of instructional planning. It appears that a teacher who refers a student desires special education placement, and that intervention has been misinterpreted as placement. Special education placement is only one type of intervention and it is not the sole solution to the classroom teacher's concern. Therefore, rather than operating in a referral-to-placement paradigm, school systems must discuss and implement referral-to-intervention paradigms. This systems change would not preclude assessment entirely, although it should reduce the number of assessments for cases in which the teacher's concern could be solved within the classroom through behavioral consultation.

Two alternatives to typical referral procedures were examined in this report. One alternative involved the continuous monitoring of student performance on direct academic measures. When a student continues to perform poorly over a period of time on these measures, that student is referred for a psychoeducational evaluation. The second alternative involved the requirement that systematic instructional interventions be implemented in the regular classroom before a referral for psychoeducational evaluation could be made. The research results indicated that each alternative eliminated several of

the problems (such as teacher bias, high probability of placement following referral) associated with typical referral procedures.

Alternatives to current practices in referring students for psychoeducational evaluations must be explored further. Alternatives could be designed not only to increase the appropriateness of special education placements, but also to avoid unnecessary placements. Of course, when addressing ways in which to change the referral process, one must recognize that referral is a complicated process. It is influenced by student, teacher, and school system characteristics, which in turn are influenced by legal, social, and political issues.

## Chapter 3

## Who Is Referred for Psychoeducational Evaluation?

This chapter summarizes IRLD research findings related to the issue of who is referred for psychoeducational evaluation. Three specific questions are addressed in this chapter:

- How many children are referred?
- What are the characteristics of referred students compared to non-referred students?
- Do student characteristics bias decisions made during the referral process?

For each question, the major findings are summarized and the data sources from which the findings were obtained are listed (generally ordered in terms of recency). Specific evidence for the major findings then is presented.

1. How Many Children Are Referred?

## Findings:

- a. Classroom teachers refer, on the average, about three students annually.
- b. On the average, about 5% of elementary students are referred annually.
- c. Referral rates vary according to location and referral procedures.

## Data Sources:

- Surveys of classroom teachers (RR 58, 91)
- Survey of special education directors (RR 103)
- Comparative study of referral procedures (RR 75)

## Evidence:

In one teacher survey (RR 91), teachers reported an average of 2.2 students referred during 1977-78, 2.4 during 1978-79, and 3.0

during 1979-80. In another teacher survey (RR 58), an average of 3.9 students per teacher reportedly were referred during the 1980-81 school year. Special education directors (RR 103) indicated that an average 5% of elementary students were referred during the three school years 1977-1980. Yet, one director reported 0% while another reported 30%.

Referral rates vary greatly. Large differences have been found as a function of geographic area as well as a function of the referral procedure. In a small town community in the midwest, where teachers were required to implement and document interventions before referral, a low referral rate (1.8%) was observed (RR 75). This rate was lower than that resulting from an alternative referral procedure that involved testing students on direct academic measures (2.4%).

## 2. What Are the Characteristics of Referred Students Compared to Non-Referred Students?

### Findings:

- a. Students referred for psychoeducational evaluation and those labeled as learning disabled are described differently from non-referred or non-labeled peers by both regular and special education teachers.
- b. Students referred for special education cannot be differentiated from non-referred low achieving students on traditional psychometric measures; however, data reflecting classroom performance (i.e., direct measures) seem to discriminate the students.

### Data Sources:

- Survey of classroom teachers (RR 91)
- Direct measure assessment of low achievers (RR 71)
- Survey of special education teachers (RR 66)
- Psychometric assessment of low achievers (RR 13)



## Evidence:

Regular education teachers perceive students whom they have referred as being different from other (non-referred) students in their reading groups in terms of speed of learning, motivation, maturity, and judgment (RR 91). Referred students consistently were rated as poor or very poor relative to their peers on these characteristics, whereas they were not rated consistently as poor or very poor in terms of their ability to learn or their ability to behave. Overall, most teachers felt that referred students did not function well within the group and were not typical of other students in the group. Further, most teachers indicated that for the referred students to fit adequately into their classrooms, the students would have to change their task readiness behaviors (e.g., finish work, pay attention, follow directions). Yet, the reasons teachers gave for referring these students most often were for learning-related or emotionally-manifested problems.

LD teachers often describe the characteristics of referred students who are diagnosed as LD in terms of processing, memory, and attentional difficulties, poor academic achievement, and some type of discrepancy in their performance (RR 66). Yet, comparisons of low-achieving students who are not referred by their teachers with students who are referred and served in LD programs reveal few differences of practical utility between the two groups on psychometric measures typically used to justify their classification (RR 13). However, data that more accurately reflect typical classroom performance (such as direct measures of reading, spelling, and written

expression) more often discriminate the two groups of students (RR 71).

### 3. No Student Characteristics Bias Decisions Made During the Referral Process?

#### Findings:

- a. Decisions to refer are influenced by the student's sex and whether the student has an older sibling who has exhibited school problems.
- b. A teacher's tolerance for certain student behaviors influences the teacher's prognoses for student progress; low tolerance for a behavior may increase the likelihood that students exhibiting that behavior will be referred.
- c. Student problems identified in referral unduly influence educators' placement decisions.

#### Data Sources:

- Surveys of classroom teachers (RR 29, 39, 91)
- Case study investigation (RR 74)
- Comparative study of referral procedures (RR 75)
- Survey of special education directors (RR 60)
- Decision-making simulation study (RR 18, 26, 32, 33, 34)
- Disturbing Behavior Checklist validation study (RR 8)

#### Evidence:

Regular classroom teachers refer approximately 2 1/2 times more boys than girls. When traditional referral procedures were examined (RR 75), 80% of the students referred by teachers were boys. In contrast, when direct measures were used to identify those students to be referred, only 66% were boys. Boys were referred for behavior disorders relatively more often than girls, and teachers wanted special education placement and help outside of school (counseling,

private tutoring) relatively more often for boys than they did for girls (RR 91). Also, teachers used behavioral strategies (charting, contingency contracting) as pre-referral interventions more with boys while they used structural interventions (peer tutoring, seat change, grouping change) more with girls.

Regular class students who have older learning disabled siblings are expected to do relatively less well than students who have older siblings who are regular students (RR 29, 39). Teachers expected differences in such areas as reading level, general knowledge, visual and/or auditory perception, and memory skills. Children who had older LD siblings also were expected to make less progress during the year and to need more support services than children with non-LD siblings.

Teachers indicated different prognoses for students exhibiting different behaviors; their prognoses were a direct function of their tolerance for those behaviors. Teachers not bothered by student behaviors held higher expectations for a student than did teachers who were bothered by the behaviors. Thus, the extent to which a particular teacher finds a particular type of behavior as disturbing may influence the likelihood that a student exhibiting that behavior will be referred (RR 8, 74). The idea that mismatches between students and teachers influence referral practices appears viable.

The nature of factors that influence teacher referrals is important since the decision to refer a student plays a strong role in other decisions made about that student. For example, on the average, the student who is referred is likely to be assessed and placed in special education (RR 60), an occurrence that reflects the finding

that decision makers in general place extremely high value on problems identified in referrals, even when assessment data indicate completely average psychometric and observational scores (RR 18, 36, 32, 33, 34).

## Chapter 4

## Why Do Teachers Refer Students?

This chapter summarizes IRLD research findings related to the issue of why teachers refer students for psychoeducational evaluation. Six specific questions are addressed in this chapter.

- What institutional constraints and external pressures influence teachers' decisions to refer students?
- What are the characteristics of referring teachers?
- What are the most common reasons for referral?
- To what do teachers attribute referred students' difficulties?
- What do teachers desire as an outcome from referral and assessment procedures?
- What changes must referred students make to remain in the mainstream classroom structure?

For each question, the major findings are summarized and the data sources from which the findings were obtained are listed (generally ordered in terms of recency). Specific evidence for the major findings then is presented.

#### 4. What Institutional Constraints and External Pressures Influence Teachers' Decisions to Refer Students?

##### Findings:

- a. Institutional constraints limit the number of students referred for psychoeducational evaluation more than external pressures increase the number of students referred.
- b. School districts' variability in implementing the assessment to placement process influences teachers' decisions to refer.

##### Data Sources:

- Survey of classroom teachers (RR 58)
- Surveys of special education directors (RR 14, 60)

#### Evidence:

Regular education teachers (RR 58) indicated that organizational factors (e.g., rules, procedures, guidelines), availability of services, and "hassle" (e.g., paperwork, meeting time) were the greatest barriers to referral (although 21% said there were no barriers), and that outside agency influence, federal or state requirements, and concerns of parents were the most common external pressures for referrals (although 70% said there were no external pressures). These same teachers generally estimated the probability of a referred student being placed as very high. Yet, they expressed skepticism about the payoff of the team decision-making process. Special education directors (RR 14), noting difficulties with the decision-making process, reiterated teachers' concerns about length of time from referral to team decision making. Institutional constraints influenced teachers' referral decisions to a greater degree.

The ease or difficulty with which referred students move through the assessment to placement process also seems to influence the extent to which teachers refer students. Although special education directors indicated that an average of 92% of referred students are evaluated and that 73% of those evaluated receive special education services (RR 60), variability is great, with the percentages of referred students evaluated in different school districts ranging from 39% to 100% and the percentages of evaluated students placed ranging from 10% to 100%.

## 5. What Are the Characteristics of Referring Teachers?

### Findings:

- a. Teachers report that certain "teacher variables" influence their decisions to refer students for psychoeducational evaluation.
- b. No consistent relationship exists between several teacher characteristics and teacher referral rates.

### Data Sources:

- Surveys of classroom teachers (RR 53, 91)

### Evidence:

Almost all teachers make referrals at some time, but the frequency with which they do so varies considerably. Teachers themselves have suggested that certain "teacher variables" inhibit or facilitate the tendency to make referrals (RR 58). Teacher skepticism about the payoff of the process most often inhibited referral. The teacher's belief system, knowledge of individual differences, willingness to modify the curriculum, and tolerance all were said to have an influence on a teacher's referral rate, suggesting that teachers who are willing to modify the curriculum and who are tolerant of various behaviors, for example, are less likely to refer students.

Analyses of data from classroom teachers making actual referrals of students for psychoeducational evaluation (RR 91) did not reveal any consistent relationships among several traditional teacher variables (age, sex, experience, etc.) and the numbers of students they had referred in previous years. Furthermore, there were no consistent relationships between referral history and such variables as reasons for referrals, attributions for student problems, and desired outcomes of referral.

## 6. What Are the Most Common Reasons for Referral?

### Findings:

- a. Primary reasons for referrals relate to low academic or behavioral performance in the classroom.
- b. Poor academic performance does not ensure referral; in some cases, students must demonstrate behavioral difficulties before they are referred for low achievement.

### Data Sources:

- Survey of classroom teachers (RR 91)
- Comparative study of referral procedures (RR 75)
- Longitudinal study of decision making (RR 44)
- Instructional time observations (RR 95)

### Evidence:

Teachers most often say they refer students because of classroom difficulties reflecting either learning-related problems (specific learning deficits, below grade level performance) or emotionally-manifested problems (poor school adjustment, poor self-concept, immaturity) (RR 91). Learning-related reasons exceed reasons related to emotional factors.

Selected case studies corroborate the survey results. Of 11 students who were observed as they proceeded through the referral, assessment, and placement process (RR 44, 95), academic difficulties were listed in all of the students' written referrals. Emotional and/or behavioral problems also were noted in four of the referral statements. Additional reasons (e.g., short attention span) were given in two of these.

Similar numbers of students are referred by teachers as are referred by a procedure in which their performance is assessed using



direct academic measures (RR 75). However, teacher-referred students are more likely to be rated as having behavior problems. Again, mismatch between students and teachers may influence referral practices.

## 7. To What Do Teachers Attribute Referred Students' Difficulties?

### Findings:

- a. Students' school difficulties rarely are seen as resulting from an interaction of child characteristics, teacher characteristics, and school characteristics; they are attributed primarily to student or home characteristics.
- b. Special education teachers are somewhat more likely to identify school factors as the cause of problems than classroom teachers.
- c. Emphasis on the competence of a student may alter teachers' attributions for a student's problems.

### Data Sources:

- Surveys of classroom teachers (RR 29, 39, 91)
- Surveys of special education teachers (RR 43, 66)
- Case study investigation (RR 131)

### Evidence:

Over 60% of the causes of students' problems that were listed by referring teachers could be categorized as within-student causes (e.g., birth defects, low potential) and over 35% could be categorized as home causes (e.g., divorce, family instability) (RR 91). Less than 3% of the causes listed were related to teacher or school factors. Regular class teachers reacting to case study reports also tended to provide "other-directed" attributions (student or home) for student difficulties (RR 131). Similarly, teachers of LD students most often identify student inabilities (58%) or problems within the home

environment (23%) as the reasons for learning disabilities (RR 66).

However, these teachers more often than regular educators attributed the disabilities to some kind of failure on the part of the school (18%), usually to inadequate regular education teachers or curricula.

When asked about the etiology of learning disabilities, two groups of regular education teachers most often indicated that environmental factors were the cause (RR 29, 39). Medical, hereditary, and combinations of causes were cited much less frequently. Of course, environmental causes include within-student problems and home problems, as well as teacher or school problems.

Special education teachers who had observed a student's performance and reviewed information about the student indicated different attributions for students portrayed in different ways. The student's performance was attributed more to task difficulty and effort and less to chance when the student was represented as a more competent student. Performance of an ED child was attributed more to effort than was performance of an LD child (RR 43).

#### 8. What do Teachers Desire as an Outcome from Referral and Assessment Procedures?

##### Findings:

- a. When teachers refer students, they generally want assistance from special education support staff.
- b. Teachers seem to have much less desire for educational suggestions than they do for student placement, but this may be a result of their previous experiences with the referral system.

##### Data Sources:

- Surveys of classroom teachers (RR 58, 91)

## Evidence:

When teachers refer students, most of the reported desired outcomes (66%) were for placement or placement-related activities (assessment, decision making) to occur (RR 91). Desires for educational suggestions or help for the student were mentioned with much less frequency (25%). As a result of assessment, many (40%) of these same teachers wanted placement of the student. Desires for educational suggestions from assessment results were mentioned by 30% of the teachers.

Teachers asked to identify factors that inhibited decisions to refer students frequently noted the lack of educational suggestions for use in the classroom (RR 58). This, in turn, seemed to be reflected in their belief that the payoff for referral is low. It may be that teachers who refer students indicate that they want them placed in special education because experience has shown them that this is almost all that will happen.

9. What Changes Must Referred Students Make to Remain in the Mainstream Classroom Structure?

## Findings:

- Teachers most often indicated that referred students need to make task readiness changes involving student preparation and receptivity to learning to fit within their classrooms.

## Data Sources:

- Survey of classroom teachers (RR 91)

## Evidence:

Teachers reported that task readiness changes (finish work, pay attention, follow directions) were the most important ones that

students needed to make; academic changes were desired half as often (RR 91). Task readiness changes were indicated regardless of whether the primary reason for the student referral had been a learning-related or an emotionally-manifested one.

## Chapter 5

## What is the Nature of the Referral Process?

This chapter summarizes IRLD research findings related to the issue of what happens during the referral process. Five specific questions are addressed in this chapter:

- What pre-referral interventions do teachers use?
- Who typically makes a referral?
- Who typically receives referrals?
- What happens when a referral is made?
- What are the effects of using an alternate system of referral?

For each question, the major findings are summarized and the data sources from which the findings were obtained are listed (generally ordered in terms of recency). Specific evidence for the major findings then is presented.

10. What Pre-Referral Interventions Do Teachers Use?

## Findings:

- a. Use of pre-referral interventions is variable; they rarely occur as part of a formal referral process.
- b. Teachers report attempting several pre-referral interventions; however, the interventions appear to lack systematic implementation.

## Data Sources:

- Survey of classroom teachers (RR 91)
- Longitudinal study of decision making (RR 44)
- Survey of special education directors (RR 14)

## Evidence:

Less than 5% of the special education directors included any kind of pre-assessment interventions as part of the referral process (RR /

14). Teachers who had referred students for psychoeducational evaluations, on the average, reported that they had tried about 3 different interventions before the referral was made (RR 91). Most often, the pre-referral interventions involved changes in methods, including individual attention, curriculum adjustments, and attempts to orient the student to the task. Only a small percentage of all the interventions attempted resulted from consultation with another individual. When someone was consulted, it most often was a special education teacher or a principal. Almost none of the interventions reflected psychological learning principles. Further, few teachers mentioned a specific period of implementation or evaluation of the interventions.

Interviews of educators indicated that the extent to which specific interventions are attempted prior to referral is highly variable; some teachers made no attempts at pre-referral interventions, others made minor materials and structural changes, while one made very specific changes based on behavioral observations of the student in the classroom (RR 44). In almost all cases, the teachers' attempts at classroom modifications or other pre-referral interventions were not evaluated as part of the decision-making process.

#### 11. Who Typically Makes a Referral?

##### Findings:

- a. Classroom teachers most often initiate the referral for special education consideration.
- b. Typically, a specific form is completed by the referring teacher to initiate the official decision-making process.

## Data Sources:

- Surveys of classroom teachers (RR 58, 91)
- Longitudinal study of decision making (RR 44)
- Survey of special education directors (RR 14)
- Survey of model LD programs (RR 11)

## Evidence:

When describing the steps in the assessment and decision-making process, about 75% of the directors of special education associated the teacher with the referral step; when parent referral was mentioned, it was only in conjunction with a teacher referral (RR 14). Similarly, over 50% of the model programs for LD students (CSDCs) associated the referral step with the teacher (RR 11). Both the special education directors and CSDCs included teachers spontaneously; they had not been asked to identify who could make referrals. In the observation of actual student cases, it was found that even when the parent was the person who first expressed concern with a student's progress in school, the teacher had to be the one to make the referral before the school would act on it (RR 44). The teacher typically was required to fill out a one-page form that asked for student information, the reason for referral, and an indication of whether the parent(s) had been contacted. Teachers had indicated that the kind of referral form used by the school affects the extent to which they are willing to make referrals (RR 58). When regular education teachers were asked to indicate the appropriate time to make a referral, most responded either (a) when the student was not functioning, or (b) during the first trimester of the school year. Few teachers indicated

that the student should have been not functioning (a) over a period of time, or (b) despite the teacher's modifications.

## 12. Who Typically Receives Referrals?

### Findings:

- a. The individual responsible for accepting referrals varies among school districts.
- b. The competence of the individual accepting the referral is a critical factor in whether teachers decide to refer a student.

### Data Sources:

- Survey of classroom teachers (RR 58)
- Longitudinal study of decision making (RR 44)
- Survey of special education directors (RR 14)

### Evidence:

In identifying steps in the assessment and decision-making process, only 37% of the special education directors mentioned a formalized procedure for reviewing a referral before assessment was initiated (RR 14). Observations of actual referral cases indicated that child study teams, school social workers, special education teachers, and principals were among those to first receive the formal teacher referral form (RR 44). In some cases these individuals automatically passed the referral on to a team who set up guidelines for assessment; in other cases, the person receiving the referral completed other forms before decisions about assessment were made. Regular education teachers have noted that the perceived competence of the person(s) designated to receive referrals has an effect on whether a referral is made, as does the extent to which the referral recipient encourages or discourages referrals (RR 58).



### 13. What Happens When a Referral is Made?

#### Findings:

- a. Although variability across school districts is great, in general there is a high probability that once a referral is made the student will be evaluated and served in special education.
- b. The referral-to-placement process is lengthy.
- c. Student information on referral forms affects assessment devices selected, determination of the student's placement category, and teacher expectations for the student.
- d. School criteria for eligibility influence eligibility decisions; different students are identified as eligible for services when different criteria are applied.

#### Data Sources:

- Surveys of classroom teachers (RR 58, 91)
- Comparative study of referral procedures (RR 75)
- Surveys of special education directors (RR 14, 60)
- Analysis of psychometric assessment data (RR 47)
- Longitudinal study of decision making (RR 44)
- Decision-making simulation study (RR 18, 19, 32, 33)
- Survey of model LD programs (RR 11)
- School record review (RR 136)

#### Evidence:

Both directors of model programs for LD students (RR 11) and directors of special education (RR 14) include the referral step in their descriptions of the decision-making process with much greater frequency than any other step except assessment. Typically, referral is seen as the first step in the decision-making process. Following referral, assessment activities are initiated, including the appointment of an assessment team, and obtaining parental permission

to assess, as well as the actual assessment. Despite the consistency in descriptions of the process by special education directors and directors of model LD programs, almost 25% of regular education teachers who were referring students reported that they did not know what their districts procedures were (RR 58). The amount of time required for the decision-making activities to occur varies widely, but there is often considerable discrepancy between the time when concern about a problem first is expressed and the time when the assessment is conducted, even though no changes had been implemented within the classroom (RR 44).

Once a referral for evaluation is made, the student seems to have entered a one-way street leading to assessment and placement. When asked about the chances that a referred student would be placed, a majority of teachers indicated probabilities that were very high (RR 58); about 30% responded with a percentage greater than 80%. Teachers made such comments as, "There is a 90-100% chance of a student being placed once he[she] is tested" and "Students are usually placed since teachers recognize those who do qualify when the process is complete."

These comments and percentages are supported by special education directors' reports of actual numbers of referred students who were assessed and placed (RR 60). On the average, 92% of those students referred were evaluated; 73% of those evaluated were placed in special education. Variability across districts was great, with one evaluating only 39% of the students referred and another evaluating all; in one district only 10% of those students evaluated were placed, while in another all evaluated students were placed. Overall, lower

percentages of students were referred, evaluated, and placed in urban areas; higher percentages of students were placed in the southern and western regions of the U.S. Survey responses of regular education teachers (RR 91) indicated that an average of 91% of those students they had referred during 1977-78 were evaluated and 75% of those were placed. The average percentages for 1978-79 were 92% and 82%; for 1979-80, the average percentages were 90% and 70%. School record reviews in a school district where students are referred by category similarly indicated that 72% of the referred students were placed in some form of special education, and that most were placed in the category for which they were referred (RR 136). Thus, the percentages calculated on a district-wide basis and on an individual-teacher basis are similar and high.

In some districts, attempts have been made to drastically reduce the percentage of students placed following assessment. In one district, a severe deficit criterion for performance on one test battery was established (RR 47). Of 51 students who were assessed, only 47% were placed in special education. Yet when the assessment data from these students were entered into other severe deficit criteria, the same students were not identified as eligible for services.

In another school district where a specific severe discrepancy criterion was used, 44% of a sample of students who had been referred by teachers were placed in special education services (RR 75). In the same district, only 14% of a sample of students who had been referred as a result of their performance on weekly measures of reading,

spelling, and written expression were placed in special education services. Yet, no differences were found between the two groups of referred students in terms of cognitive functioning, achievement level, and social behavior. Further, only 36% of the teacher-referred students who were placed in special education met the school district's severe discrepancy criterion.

Thus, the mere fact that a teacher has referred a student seems to influence other decisions made about that student and even expectations for the student. School decision makers participating in simulated decision making predicted differential performance of students as a function of information presented in referral folders (RR 18, 32, 33). Further, different test data were requested as a function of the stated reason for referral (RR 32, 33). Despite the fact that all test data provided to the decision makers were indicative of average performance, 51% of the decision makers declared the student eligible for special education services; the classification assigned to the student in many cases was related directly to the stated reason for referral. When asked about the influence of various factors on their decisions, the decision makers consistently rated the referral statement of the student's problem as having a significant influence.

Despite the demonstrated importance of the fact that a student is referred and the stated reason for the referral, no systematic relationship has been identified between the reason for referral and the types of pre-referral interventions that teachers implement, what the teacher believes the student would have to do to fit within the

mainstream classroom structure, or the desired outcome of the referral (RR 91).

#### 14. What Are the Effects of Using an Alternate System of Referral?

##### Findings:

- The use of data-based procedures, employing local norms with a 2-3 times peer discrepancy criterion, is a viable alternative to traditional teacher-initiated referral procedures.

##### Data Sources:

- Comparison of direct measure eligibility criteria (RR 89)
- Direct measures norm development (RR 87)
- Comparative study of referral procedures (RR 75)
- Development of local norms (RR 132)
- Comparative study of pre-referral interventions (RR 140)

##### Evidence:

Students referred by teachers and by data-based procedures were comparable in several ways (RR 75). First, the percentages of students referred were similar, with the percentage referred by data-based procedures (2.4%) slightly higher than the percentage referred by teachers in this study (1.8%). The average grade levels of the two groups were the same. Further, no differences were found between the two groups in cognitive ability, achievement, or ability-achievement discrepancies.

Some important differences were noted between the two groups, however. Referrals of boys were made much more frequently by teachers (80%) than by data-based procedures (66%). Further, there was a tendency for girls referred by teachers to exhibit more school behavior problems than girls referred by data-based procedures.

Finally, only 14% of the students referred by data-based procedures were declared eligible for special services by the schools, while 44% of the students referred by teachers were declared eligible. Thus, despite the comparable standardized test data for the two groups, decision-making teams seemed to have been influenced by the fact that a referral was made by a teacher, a person who was asking for help. Analysis of the standardized test data for students declared eligible revealed that only 36% of those students who had been referred by their teachers and declared eligible by the schools actually met the severe discrepancy criterion for eligibility established by the schools, while 80% of those students referred by data-based procedures did so.

The use of local norms for direct measure performance comparisons is recommended. An attempt to develop national norms (RR 87) indicated that although student performance showed the expected grade differences and improvement within grades, considerable differences in average performance were evident among different locations. A 2-3 times peer discrepancy criterion appears to identify percentages of students comparable to those presently served in special education programs (RR 89). Local norms have been developed and used successfully in at least one large special education cooperative (RR 132).

Another approach being studied as an alternative to current referral procedures involves the systematic use of specific interventions within the class before the student is evaluated. A year-long study of such an approach indicated that while referral

rates for those teachers receiving pre-referral assistance did drop significantly at first, resistance to the system erased many of the expected effects. However, several teachers were able to implement the system successfully, thus suggesting its viability. It appears that successful implementation of the system will require more attention to an attitude away from the belief that student learning difficulties can be fixed by testing, labeling, and special education placement, toward the recognition that by dealing with student problems in the regular classroom, special education placements can be avoided and students' instruction can be improved.

The referral systems described here are but two of several alternatives that might be implemented. Clearly, additional field-based research is needed to identify viable referral systems for today's schools.

## Chapter 6

## Data Sources

This chapter provides a summary of the data sources and research procedures used to obtain the research findings presented in the previous chapters. An overview of the data sources is provided in Table 1. The IRLD research reports in which more detailed explanations may be found are listed in the table, as are the numbers of the corresponding research questions. The data sources are ordered within this chapter (and the table) according to the frequency with which they are cited as sources of evidence for various research questions.

Survey of Regular Education Teachers Who Had Referred Students for Psychoeducational Evaluations (RR 91)

During 1980-81, 105 elementary regular classroom teachers completed referral surveys at the time they referred students for psychoeducational evaluations. Ninety-one percent of the teacher sample was female; the average number of years of teaching experience was 11.4 (range = 1-35 yrs.). The average class size per teacher was 25 students. The teachers were from 14 public school districts within 10 states distributed across the four regions of the United States. Suburban, urban, and rural school districts were included. School district administrators served as contact liaisons between researchers and schools. Principals asked teachers to read a letter describing the study at the time they initiated a referral, and if interested in participating, to complete the survey and return it directly to the investigators.



Table 1  
Referral Research Data Sources

Data Source	Research Reports	Questions
Survey of regular ed teachers	91	1,2,3,5,6,7,8,9,10,11,13
Survey of regular ed teachers	58	1,4,5,8,11,12,13
Comparative study of referral procedures	75	1,3,6,13,14
Survey of special ed directors	14	4,10,11,12,13
Longitudinal study of decision making	44	6,10,11,12,13
Survey of special ed directors	60,103	1,3,4,13
Survey of LD teachers	66	2,7
Survey of regular ed teachers	29,39	3,7
Case study investigation	74,75,131	3,7
Decision-making simulation	9,18,19,26,32,33,34,85	3,13
Survey of model LD programs	11	11,13
Psychometric assessment of low achievers	13	2
Direct measure assessment of low achievers	71	2
Disturbing Behavior Checklist validation	8	3
Instructional time observations	95	6
Survey of special ed teachers	43	7
Analysis of psychometric assessment data	47	13
School record review	136	13
Direct measures norm development	87	14
Comparison of direct measure eligibility criteria	89	14
Development of local norms	132	14
Comparative study of pre-referral interventions	140	14

A two-page survey form was used to elicit information about the referred students. In addition to rating the referred student relative to his/her reading group classmates, each teacher provided information regarding six factors: (a) reasons for referral, (b) causes of the student's school difficulties, (c) interventions attempted within the classroom before referral, (d) desired outcomes from the referral, (e) desired outcomes from the assessment, and (f) desired changes in the referred student's behavior. Ratings of students relative to reading group peers were made on a scale of 1 to 5 across several dimensions: functioning within the group, functioning as typical of the group, ability to learn, speed of learning, motivation, behavior, maturity, and judgment. A free-response format was used to obtain information on the six factors.

Survey of Regular Education Teachers on Factors Influencing the Decision to Make a Referral (RR 58)

During 1981-82, 52 teachers in Minnesota and Florida responded to a survey on several issues related to referral. Sixty percent of the teachers were elementary school based. All but five of the teachers were regular education teachers.

A six-question open-ended survey was used to obtain information on: (a) the referral procedure, (b) the number of students referred, (c) the appropriate time to refer a student, (d) barriers to referral, (e) factors that facilitate referral, and (f) perceived probabilities for special education placement of referred students.

Comparative Study of Referral Procedures (RR 75)

Two referral procedures were compared during 1980-81 within six elementary schools. All schools were located within a 50-mile radius

of a large metropolitan area in the Midwest, and were in small town, rural settings. School populations ranged from 110 to 696. Only grade 3-6 students were included in the comparative study.

Traditional teacher referral was one of the procedures included in the study. According to the school districts' guidelines, teachers first had to initiate an intervention with a potential candidate for referral. If the intervention plan failed, the student then could be referred for psychoeducational evaluation.

The second referral procedure involved weekly measurement of performance in reading, spelling, and written expression. Students who had been identified as high risk because they had scored at or below the 15th percentile on a screening measure of written expression were tested weekly, over a 10-week period, on measures of reading, spelling, and written expression. Each week, student performance was scored and plotted on a graph. A student was referred if his/her performance in at least two of the three academic areas was at a level more than two standard deviations below the mean performance of students in the same grade from a local normative sample.

The students referred by the two procedures were compared with respect to referral rate, cognitive functioning, achievement level, social behavior, sex differences, and identification as learning disabled.

#### Survey of Special Education Directors on Assessment and Decision-Making Practices (RR 14)

During 1979, 100 directors of special education from 49 states provided information on assessment and decision-making practices in

their school districts. Their school districts were located in rural, urban, and suburban settings, and varied widely in total population served and number of pupils attending elementary classes. Elementary class enrollment ranged from less than 100 pupils to over 50,000 pupils. The average per-pupil expenditure for regular education services was \$1391.24; the average expenditure for special education services was \$2205.50.

In addition to obtaining background information about the school district, the survey form elicited information on (a) the typical composition of the teams involved in making screening, placement, and instructional programming decisions, (b) the sequence of steps in the assessment and decision-making process, (c) factors thought to influence the outcome of the team decision-making process, and (d) general concerns regarding placement team decision making and the development of the individualized educational plan (IEP).

#### Longitudinal Study of Decision Making (RR 44)

Naturalistic observation procedures and interviews were employed during 1979-80 to study the assessment and decision-making events that occurred in the cases of seven students from the time of their referral for special education assessment to the time when an educational program was implemented or a decision was made not to provide special education services. The seven cases were selected from five elementary schools within a midwestern metropolitan area. Students included were ones who were referred for eligibility and placement evaluations, and who were likely to be involved in the entire decision-making process in their schools. (The likelihood of

the student being involved in the entire decision-making process was determined by interviews with school personnel and the nature of the student's referral problem.) Students who were clearly mentally retarded or sensorially impaired were not included.

Data were obtained by (a) observing meetings at which the target student was discussed, (b) reviewing reports or other written documents about the student, and (c) interviewing key school personnel and the student's parent(s). Written notes on their observations and interviews were maintained by the researchers; these were used to develop reports on the seven students. The reports were written to provide a description of the events that occurred in each case.

Survey of Special Education Directors on Referral-to-Placement Probabilities (RR 60, 103)

During 1981, 94 special education directors from 37 states responded to a postcard survey. The directors were distributed fairly evenly across the four regions of the United States, and were located in rural, urban, and suburban areas. A letter explaining the purpose of the study and a postcard were mailed to over 700 directors. Although 164 postcards were returned, many directors indicated they did not have access to the requested data; others completed the postcards inaccurately.

For each of three academic years (1977-78, 1978-79, 1979-80), the postcard survey requested information on (a) the numbers of students referred for psychoeducational evaluation, (b) the numbers of referred students who were evaluated, and (c) the numbers of evaluated students who received special education services.

Psychometric Assessment of Low Achievers (RR 13)

During 1979, samples of 50 school-identified LD students and 49 low achievers who had not been identified as LD by their schools were administered a battery of psychoeducational tests. All students were in fourth grade. All non-LD students were low achievers; they had scored at or below the 25th percentile on the Iowa Tests of Basic Skills administered during the fall of 1978. LD students were ones who had been identified by their schools as LD within six months of the time at which they were selected to participate in the study. The students were from nine school districts within and surrounding a large metropolitan area in the midwest. The two groups were similar in terms of age, sex, parental marital status, father's SES, mother's SES, and family income.

All testing was completed by qualified psychometricians and occurred during approximately the same period (January to May). The tests administered to students were the Woodcock-Johnson (W-J) Psycho-Educational Battery, Tests of Cognitive Ability and Tests of Achievement, the Wechsler Intelligence Scale for Children-Revised (WISC-R), the Peabody Individual Achievement Test (PIAT), selected subtests of the Stanford Achievement Test, the Bender Visual-Motor Gestalt Test (BVMGT), the Developmental Test of Visual-Motor Integration (DTVMI), the Piers-Harris Self-Concept Scale, and the Peterson-Quay Behavior Problem Checklist. This group of tests was selected to reflect those devices commonly used with LD youngsters. Only 7 of the 10 subtests of the Woodcock-Johnson Tests of Achievement were administered. Administration of the total of 49 subtests or

tests to the 99 students allowed for the comparison of the two groups' performances in five domains, as well as by subtest or test: cognitive (WISC-R, W-J Cognitive Ability), academic achievement (PIAT, W-J Achievement), perceptual-motor (BVMGT, DTVMI), self-concept (Piers-Harris), and behavior problems (Peterson-Ouay).

#### Direct Measure Assessment of Low Achievers (RR 71)

During 1980-81, a subtest of the students who participated in the psychometric assessment of low achievers study were included in this study, in which the students' performances on direct measures of reading, spelling, and writing were monitored over a five-week period. Students tested were 34 school-identified LD students and 37 low achievers, all of whom were in the fifth grade at the time the direct measures were administered to them.

Special education resource teachers in the students' schools served as testers. These individuals were trained in the administration of the academic measures and given materials for each content area. Four alternate forms were developed for each area, with the same materials used in week 1 and week 5. Examiners assessed each student individually, on a weekly basis, for five weeks.

#### Survey of LD Teachers on Their Beliefs About LD Students (RR 66)

During 1980-81, a national sample of 127 LD teachers provided information on several factors related to their beliefs about LD students and instructional procedures that work with them. The teachers were from 36 states, the District of Columbia, and Canada, and were employed in urban, suburban, and rural communities. Most of the teachers were working with elementary students, and most were female.

A two-page survey form elicited information on the teachers' beliefs about LD students and effective instructional interventions. Six free-response items asked for descriptions of: (a) major characteristics of LD students, (b) major reasons children become LD, (c) information most useful in determining level and amount of service needed by LD students, (d) what works best for teaching reading to LD students, (e) what works best for teaching mathematics to LD students, and (f) what works best for teaching written language to LD students. For each response to these items, subjects were instructed to indicate the major source of their information (experience, books and journals, training, or other). The survey also presented seven statements about LD students and asked subjects to indicate their agreement with each of them on a four-point scale from "strongly agree" to "strongly disagree." In addition, subjects were asked to indicate the extent to which 15 student characteristics were a problem in working with LD youngsters, using a four-point scale from "very significant problem" to "not a problem." Finally, the survey asked subjects to provide information about their backgrounds, the programs in which they were teaching, the children served, and their school district criteria for classification of a student as LD.

Survey of Regular Education Teachers on Their Expectations for Siblings of LD Students (RR 29, 39)

Two samples of regular education teachers were surveyed regarding their attitudes and expectations for siblings of LD students during 1979-80. The first sample was considered to be a pilot study sample.

Pilot study teachers included 18 regular education teachers of students in grades K-5. They were from four school districts in two



metropolitan areas in the midwest; 15 of the teachers were female. Average years of teaching experience was 15.2 (range = 8-28). These teachers rated 27 students in their classes who were younger siblings of LD and non-LD students; 11 boys and 16 girls were rated. All teachers had previously taught the older sibling of the rated students currently enrolled in their classes. In 16 cases the older sibling was LD and in 11 cases the older sibling was not LD.

The second sample of teachers included 16 regular third grade teachers from seven school districts in a large metropolitan area in the midwest; 14 of the teachers were female. Average age of the teachers was 36.4 years (range = 26-60) and average years of teaching experience was 11 (range = 3-20). Each teacher rated hypothetical younger siblings of four students who had been in their classes for the entire school year. Two of these students were school-identified LD students (one girl, one boy) and two were non-handicapped students (one girl, one boy).

A rating scale was developed to obtain information on the teachers' expectancies for the behavioral and academic performances of the students being rated. Measures of academic, motor, perceptual, behavioral, and socio-emotional functioning were included. Expectations for the child's overall progress and need for support services also were measured. All items were rated on a five-point scale from 1 (poor or deficient performance) to 5 (excellent or superior performance). In addition, each teacher was interviewed to obtain information on the teacher's opinion as to the major cause of learning disabilities and the extent to which LD children are able to

learn as well as their "normal" peers when given appropriate support services.

Decision-Making Simulation Study (RR 9, 18, 19, 26, 32, 33, 34, 85)

During 1979-80, 224 professionals from public and private schools in Minnesota participated in a simulated decision-making study. All of these professionals previously had participated in at least two placement team meetings in which classification decisions were made. Disciplines represented within the sample included 58 regular education teachers, 79 special education teachers, 31 administrators, 30 school psychologists, and 26 other support personnel (e.g., school nurses, social workers, etc.). Most of the sample worked in suburban settings; however, urban and rural settings also were represented. Approximately 75% of the sample was female.

Each subject began by taking a pretest designed to evaluate knowledge of assessment. The subject then was familiarized with the computer terminal that was used to provide requested assessment information. After the subject responded to several demographic questions presented on the terminal, the subject was given a referral folder in which selected naturally-occurring pupil characteristics (sex, SES, appearance, referral statement of problem) had been varied systematically. The subject then was allowed to select assessment information (including technical information on specific test, quantitative test scores, and qualitative test performance) for approximately 25 minutes or until ready to make final decisions about the child. Information was available for 49 devices or procedures grouped within seven domains (intelligence tests, achievement tests,

perceptual-motor tests, behavioral recordings, personality tests, adaptive behavior scales, and language tests). All test performance information presented was indicative of average student performance. A series of outcome questions regarding eligibility, diagnosis, prognosis, and other aspects of decision making were presented. In addition, each subject rated the influence of various factors on decisions that had been made.

#### Survey of Model LD Programs (RR 11)

During 1978-79, 44 model LD programs (Child Service Demonstration Centers) located in 26 states responded to a survey on their assessment and decision-making practices. All programs were ones funded during 1978-79 by the Bureau of Education for the Handicapped.

A two-page survey form was used to obtain information on (a) the definition of "learning disabilities" used in the identification of children to be served, (b) the kinds of data and the specific instruments used for the purposes of screening, placement, instructional programming, pupil evaluation, and program evaluation, (c) the typical composition of the team making placement decisions, and (d) the usual sequence of steps in the assessment/decision-making process. In addition, data were obtained on the date each center began, and the age range and number of children served by each program.

#### Case Study Investigation (RR 74, 76, 131)

During 1980-81, 174 elementary teachers reviewed a case study on a third grade male student exhibiting either unmanageable behavior, socially immature behavior, or perceptual difficulties within the

classroom. Eighty-six percent of the sample was female and 65% were between the ages of 26 and 44. Most (92%) of the teachers taught in public schools; the distribution of participants from various types of communities (e.g., suburban, urban, rural) and grade levels (1-7) was relatively even. Teachers from each state, with the exception of Alaska, were represented. Two-thirds of the subjects had completed bachelor's or master's degrees and 40% had completed coursework in special education.

The teachers were assigned a specific student summary (i.e., immature, unmanageable, perceptual) according to the order of receipt of their signatures agreeing to participate in the study. The materials were sent in two separate mailings. The first set of materials included the student case study and an Actions to Be Taken survey. In this survey, teachers' responses to each of 40 statements about intervention were solicited. Each treatment alternative was presented in a sentence to which the teacher was to indicate degrees of agreement (i.e., 5), or disagreement (i.e., 1) on a 1 to 5 scale. The 40 intervention choices ranged from those in which the classroom teacher would have primary responsibility, to those suggesting shared responsibility, to those where the teacher would have no responsibility in implementation. The teacher then was sent a Disturbing Behavior Checklist II, Rotter's Internal-External Scale, and a demographic information form.

A two-week time limit was suggested for completing each set of materials; both a follow-up letter and postcard were used to encourage the subjects to return completed materials. The final sample included

approximately equivalent numbers of teachers who received and evaluated the immature (N=57), unmanageable (N=58), and perceptual (N=59) students.

#### Validation Study of Disturbing Behavior Checklist (RR 8)

The Disturbing Behavior Checklist II (DBC II) was developed to be an indicator of the relative disturbingness of certain behaviors characteristic of learning disabilities. A normative study then was conducted during 1977 to obtain information on the "disturbingness" of each item, as well as data from which to derive dimensions of disturbing behaviors.

Approximately 150 advanced undergraduate students were asked to complete the DBC II. Each had taken courses in special education, none had student taught, and most were female (90%). Respondents were asked to indicate, on a scale from 1 (not very disturbing) to 5 (very disturbing), "How disturbing" each item was "in working with children." Obtained data were subjected to a principal components factor analysis.

#### Instructional Time Observations of Referred Students (RR 95)

Four students were observed systematically for two entire school days each at three different times within the referral to placement process during 1980-81. The students were from four classrooms in three elementary schools in a suburban midwestern school district; three were male and one was female. They were in grades 1-3. The students had been referred by their teachers (all female) to their schools' child study teams for consideration for special education evaluations.

Data were recorded on 53 variables within six categories in 10-second intervals to examine changes in the nature of instruction and academic responding time as a function of going through the referral-to-placement process. The six categories included activity, task, teaching structure, teacher location, teacher activity, and student response. Experienced observers coded the instructional environment and student responses for each student for six full days. The first two days of data were collected before the child study team met to consider the referral. The next two days of data were collected approximately one month after an IEP had been written for the student. The last two days of data were collected approximately two months after the IEP had been specified.

Survey of Special Education Teachers on Their Attributions for Observed Student Performance (RR 43)

During 1980, a study was conducted to evaluate the extent to which special education teachers judged the mathematics performance of a fourth grade boy to be a function of his handicapping condition and/or his competence. The subjects were 46 special education teachers who were enrolled in a week-long inservice workshop on programming for emotionally handicapped youngsters. Approximately 80% of the group was female; the average age of the participants was 30 years and average number of years of teaching experience was 6. Most (54%) of the participants were currently teaching emotionally handicapped youngsters; approximately 20% were teachers in learning disabilities or mental retardation special classes. About half of the teachers were certified in the area in which they were currently

teaching and all of the others were in the process of becoming certified in their current teaching area. All of the teachers were certified in at least one area of special education.

Each teacher observed a videotape presentation of a student working on some achievement test items and some perceptual-motor tasks, and engaging in a brief free-play period. All student behavior on the tape was average. The teacher then reviewed a brief case summary that provided information suggesting average intellectual ability and some minor behavior problems. Half of the summaries contained information from an LD teacher and half contained information from an ED teacher. Also, student work samples were included; half of the teachers saw samples indicating relatively high student competence, and half saw samples indicating relatively low competence.

The extent to which the performance of the child was thought to be due to various attributes was evaluated by a short questionnaire. Teachers were asked to rate the "extent to which" math "performance was due to" ability, level of task difficulty, chance or luck, or the student's efforts. A rating scale, in which 1 = not to a great extent and 5 = to a great extent, was used to record the teachers' responses. Additionally, the participants were asked to indicate what scores (i.e., 0-20%, 21-40%, 41-60%, 61-80%, 81-100%) they thought the child would receive if given a similar math test in the future.

#### Analysis of Psychometric Assessment Data (RR 47)

During 1980-81, a study was conducted to examine the extent to which identification as LD is a function of the definition used, and

the extent to which different classifications would result from the use of different definitions. Fifty-one students referred for psychological evaluation as a result of learning difficulties in school were the subjects of this study. Thirty-three boys (65%) were included in the sample. The average age of the students was 8 years, 9 months; the youngest child was 6.6 years old and the oldest was 12.6 years old. All of the students were from one school district in Minnesota.

The school district criteria for determination of "severe discrepancies" and the "existence of special learning disabilities" in grades 1.5 through 6.9 were based on Woodcock-Johnson (WJ) performance measures. If a child's test profile yielded a "severe deficit" functioning level, the student was considered eligible for LD service. Additional testing in reading and mathematics was considered appropriate, if a "moderate deficit" was indicated by the administration of the W-J aptitude and achievement clusters. By these criteria, school personnel identified 24 of the 51 students (47%) as eligible for LD services.

The average age of students identified as LD ( $X = 8$  years) was not statistically different from the average age of the students not identified as LD ( $X = 9$  years). Seventy-one percent (i.e., 17) of the LD students were boys; 60% (i.e., 16) of the non-LD students were boys; these percentages were not statistically different.

As part of the diagnostic assessment, each student was administered several psychometric devices. In addition to the W-J, the Wechsler Intelligence Scale for Children - Revised (WISC-R), and



the Peabody Individual Achievement Test (PIAT) were given. Of interest was the extent to which children identified as LD by application of the W-J "severe deficit" criterion differed in other psychometric characteristics (i.e., WISC-R and PIAT performance) from children not identified.

#### School Record Review of Referral Reason and Outcome (RR 136)

During 1982-1983, school records of 201 students referred for the first time and 57 students recommended for re-evaluation were reviewed. Students were from 31 schools in a Florida school district in which students are referred by category. The records used in the study were randomly selected.

Four types of information were collected for each record: (a) category for which student was being referred, (b) category for which student was being referred, (b) whether the case was an original referral, and (d) the decision outcome. Results were summarized by cross-tabulating reason for referral with placement outcome for first referrals and re-evaluations separately and by investigating the effect the person making the referral had on the outcome.

#### Development of Norms for Performance on Direct Measures (RR 87)

During 1979-80, direct measures of reading, spelling, and written expression were administered to 566 elementary students from three states in order to (a) investigate the feasibility of using a standard task to measure the reading, spelling, and writing proficiency of elementary children, and (b) describe procedures for establishing local norms on the standard tasks. The grade 1-6 students from Minnesota, Pennsylvania, and Washington were selected randomly from

school districts that volunteered to participate in the study. There were 275 males and 291 females in the total sample, which included 92 first graders, 85 second graders, 96 third graders, 99 fourth graders, 101 fifth graders, and 93 sixth graders.

The Minnesota sample consisted of 134 of the 566 students, 63 boys and 71 girls. Most of these subjects (73%) were selected from two urban areas with populations of 50,000 and 100,000 people. These elementary students were approximately equally distributed among grades 1 to 6. The Pennsylvania sample of students included 157 boys and 169 girls, equally distributed across the six grade levels. These elementary students were randomly selected from two areas (rural and urban) in Central Pennsylvania. The remaining 106 elementary students tested were from the Seattle, Washington area; 55 were male and 51 were female.

Each child was administered direct measures of reading, spelling, and written expression during the fall and the spring on an individual basis by an examiner trained in the administration of the measures. Data were examined in terms of grade level differences, annual growth, stability over time, and state, demographic, and sex differences.

#### Comparison of Direct Measure Eligibility Criteria (RR 89)

During 1982, performance data on direct measures of reading, spelling, and written expression were analyzed to determine the percentages of students who would be eligible for special education services by each of four discrepancy criteria. The data were obtained during 1979-80 from 566 students enrolled in grades 1-6 in Minnesota, Pennsylvania, and Washington. Data were entered into four peer

discrepancy criteria (1.5, 2.0, 2.5, and 3.0 times discrepant from peers) and the percentage of students classified according to each criterion was calculated.

#### Development of Local Norms for Direct Measures (RR 132)

During 1982-83, fall, winter, and spring local norms for student performance on direct measures of reading, spelling, math, and written expression were developed. Samples of regular education students from six school districts were asked to (a) read aloud from two basal reading passages, (b) spell words from a dictated word list taken from either a spelling series or a reading series, (c) complete math problems in addition, subtraction, multiplication, and division, and (d) complete a written composition in response to a story started.

A total of almost 1800 students participated in this local norming, with approximately equal numbers from each grade (1-6). Data were summarized on the effect of using different measurement sampling plans, the reliability of the measures, and the distribution of scores within a grade level. Also, the effects of different population sampling plans were analyzed. The local norms also were compared to national norms and to the effects of the norms on the percentages of students served.

#### Comparative Study of Pre-Referral Interventions (RR 140)

During 1982-83, three schools (2 elementary, 1 junior high) participated in a study on the effects of implementing a pre-referral intervention system. In this system, consultation, observation, and intervention occurred before a student entered the typical referral for assessment phase.

A survey assessing teachers' beliefs about special services and teachers' experiences and preferences about the referral-to-placement process was completed in the fall and spring of the school year. In addition referral rates were tabulated at the beginning of the school year, midway through the school year and at the end of the school year for both the current year (1982-83) and the previous year (1981-82). Data were analyzed to determine both (a) the effect of the prereferral intervention on referral rates as compared to the previous year, and (b) the extent to which changes in teachers' attitudes occurred over the school year.

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